

**VOLUME 3 GENERAL TECHNICAL ADMINISTRATION****CHAPTER 55 PART 145 REPAIR STATIONS****Section 1 Review and Approve a Part 145 Repair Station's Training Program****3-4461 PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODES.**

**A. Maintenance.** 3230, 3396, 3397

**B. Avionics.** 5230, 5396, 5397

**3-4462 OBJECTIVE.** This chapter defines the terms and requirements for approval of a repair station's training program under Title 14 of the Code of Federal Regulations (14 CFR) Part 145 by the responsible aviation safety inspector(s) (ASI). It also explains the policies and procedures applicable to repair stations of varying size and complexity.

**3-4463 DEFINITIONS.**

**A. Course.** A course is a set number of lectures, materials, or number of hours of study in a particular subject. For example, a course under the initial course of study for managers and supervisors may be "Repair Station Manual (RSM), Policies, and Procedures."

**B. Course of Study.** A course of study, or curriculum, is a series of related separate courses in a subject area, such as the initial course of study for managers and supervisors.

**C. Course Outline.** A course outline, or syllabus, outlines the entire subject presented in an individual course. The course outline for the "Repair Station Manual, Policies, and Procedures" course may include the modules devoted to (1) The Repair Station Manual; (2) Repair Station Policies; and (3) Repair Station Procedures, with each module further broken down into subjects. For example, the "Procedure" module could include "Recordkeeping Procedures, Timekeeping Procedures, and Facility Security Procedures."

**D. Course Module.** A course module is a set, logical, self-contained unit of a course. A course module may be given in one training session or lecture or spread over more sessions. Modules of the "Repair Station Manual, Policies, and Procedures" course may be (1) The Repair Station Manual; (2) Repair Station Policies; and (3) Repair Station Procedures.

**E. Courseware.** Instructional material developed for each curriculum: Lesson plans, instructor guides, computer software programs, audiovisual programs, workbooks, aircraft or article technical manuals, and handouts. Courseware must accurately reflect curriculum requirements, be effectively organized, and properly integrated with instructional delivery methods.

**F. Employee Training Record.** The training record is the employee file in which all training is documented and retained for Federal Aviation Administration (FAA) review for a minimum of 2 years.

**G. Indoctrination.** Part of the initial training for all incoming personnel on general procedures that are unique to the repair station's operation, maintenance and inspection systems, and regulatory compliance requirements. Indoctrination or orientation establishes a common core of knowledge among employees.

**H. Initial Training.** Establishes new employee technical skill level and is adjustable based on an assessment of their training, experience, and relevant certificates held. However, whenever changes to repair station ratings; new tools and equipment; materials; and new methods, techniques, and practices are introduced to current employees as recurrent training, the initial training requirements for new employees should be updated and existing employees should be provided abbreviated initial training on the new information.

**I. Instructor.** An individual competent in the training methods, techniques, and practices; and familiar with the subject being taught.

**J. Recurrent Training.** Repetitive training at specific intervals to refresh employee knowledge of repair station policies, programs, and regulatory requirements. Alternatively, changes to repair station ratings; new tools and equipment; materials; and new methods, techniques, and practices may be imparted to existing employees through recurrent training.

**K. Task.** A piece of work to be done; an individual task that is Part of the maintenance, preventive maintenance, and alterations required to return an article to service under the privileges of the repair station certificate and rating as assigned by appropriate management or supervisory personnel.

**L. Task Levels.** The areas defined in an articles technical data that comprise the division between maintenance, preventive maintenance, alterations, inspections, overhauls and other definitions, provide a clear indication of when a set of tasks is different from another set of tasks.

**M. Testing and Checking.** Methods for evaluating employees as they demonstrate a required level of knowledge in a subject, and when appropriate, apply the knowledge and skills learned in instructional situations to practical situations.

**N. Training Categories.** Training categories identify a distinct course of study such as indoctrination, initial, recurrent, remedial, and specialization training.

**O. Training Hours.** The total amount of time necessary to complete the training required by a curriculum segment. This must provide an opportunity for instruction, demonstration, practice, and testing, as appropriate.

**P. Training Methods.** Training methods identify how the training will be conducted and include formal classroom, computer-based, on-the-job, distance learning, and embedded training.

**Q. Training Program Characteristics.** The training program characteristics are features of an overall good training program or good training program element, such as a needs assessment and program review.

**R. Training Program Elements.** An entire training program is made up of a number of different elements, such as the recordkeeping system, the initial course of study for managers and supervisors, or the recurrent course of study for inspectors.

**S. Training Sources.** Training sources identify who conducts the training. Possible training sources are original equipment manufactures, Aviation Maintenance Technician (AMT) schools, operators and other repair stations, government agencies, and trade associations.

### **3-4464 BACKGROUND.**

**A.** Before the August 2001 final rule change, Part 145 requirements did not specify training requirements for personnel involved in the repair of aircraft, accessories, or components that are returned to service by repair stations. Exceptions to the training program requirement were focused on those repair stations that performed maintenance, preventive maintenance, and alterations for Part 121 and Part 135 air carriers and those repair stations that were European Aviation Safety Agency (EASA) accepted.

**B.** The state of aircraft maintenance has undergone a great deal of change. There is a trend for air carriers to contract work out to repair stations. This is often done for heavy maintenance that is either in excess of the air carrier's capacity, and for a specific aircraft type of which few are in operation, or for a number of specific major repairs and alterations.

**C.** With the implementation of new repair station requirements, adoption of a training program for repair station employees who perform maintenance (including inspection), preventive maintenance, and alterations would enhance aviation safety by helping to ensure that those employees are fully capable of performing the work. It also promotes a level of safety equivalent to that of maintenance performed under parts 121 and 135.

### **3-4465 BASIC FORMAT REQUIREMENTS.**

**A.** The purpose of the training program is for the repair station.

- To comply with the regulatory requirements of § 145.163;
- To provide the training necessary for employees to perform their job functions efficiently, safely, and correctly; and
- To familiarize employees with the repair station's manual, quality systems, and procedures.

**B. Training Program Manual.** The RSM or training program manual must include procedures required by the regulations for revising the training program. It must also include procedures for submitting those revisions to the certificate-holding district office (CHDO) for approval.

**C. Locations Outside the United States.** Repair stations located outside the United States should submit the repair station training program in English.

**D. Procedures.** The procedures should address how often the program will be reviewed to determine if it is current and adequate for the type of maintenance being performed at the facility. Because advancements in technology can cause aviation maintenance to change rapidly, a periodic review of training needs is appropriate. The procedures should include who will be responsible for planning recurrent training, and any new training that may be necessary. Repair stations that have established a management review program should include the training program for review during that meeting.

**E. The Principal Inspector (PI).** The PI must review the initial or revised procedures in the certificate holder or applicant's program submission. These should not be considered all-inclusive. Each facility is unique and may require additional procedures to verify regulatory requirements and the needs of the repair station. Procedures may address the following:

- Who in the repair station is responsible for submitting the initial training program and subsequent revisions to the FAA?
- When will the revisions be submitted?
- How will the revision be approved (include the company approval as well as FAA)?
- How often will the repair station review training program currency and completeness?
- Who in the repair station will perform this review?
- How will the repair station record and implement revisions?
- How will the revised text be identified and program materials updated?

### **3-4466 PREPARATION.**

**A. Inspector Responsibilities.** Each PI will need to become familiar with the operation of the repair station prior to reviewing and approving a repair station's training program submission. This is primarily due to the diversity in the certificate holder's size (physical and numbers of employees), ratings, capabilities, contract activities, and personnel experience and skill levels. The PI should consider all of these to determine if the certificate holder's training program meets the regulatory requirements in this chapter.

**B. Certificate Holder Responsibilities.** The certificate holder is responsible to ensure that the training program continuously reflects the repair station's capabilities and work its employees perform. Changes to any of the repair station's capabilities may constitute the need to revise the training program. Some of these capabilities include:

- Certificate ratings, privileges, and limitations;
- Maintenance functions performed;
- Personnel, position, ability, experience, and skill level;
- Tools, equipment, and materials;
- Procedures, methods, techniques, and practices;
- Contractual arrangements with an air carrier or operator;
- Contracting maintenance services;
- Regulatory requirements; and

- Certificate holder's RSM and quality system requirements.

### **C. Training Program Structure.**

1) Repair Station Needs Assessment. The repair station's needs assessment procedures enable the repair station to identify its training requirements based on job positions, duties, and tasks. It also establishes an objective method for determining training standards, assessing the capability of its employees, and establishing training programs for its employees to fill the gap between position/skill/task requirements and employee capabilities. Procedures associated with the repair station's needs assessment will be based on its size, employee hiring, assignment and training practices, customer bases, and the complexity of its ratings and scope of operations. The repair station should establish the basic standard that identifies the individual employee's training needs by assessing the job functions and duties against the employee's specific skills and knowledge. Training areas, programs, and lessons can then be assigned to fill any gaps between the skills and knowledge needed for the job tasks and the employee's capabilities.

a) The program description should include the processes the repair station will use to identify its training requirements for ensuring each individual assigned to perform maintenance (including inspection), preventive maintenance, and alterations tasks is capable of performing the job properly. The training needs assessment is a method of analyzing the job tasks associated with repair station's maintenance and alteration positions. This entails identifying the knowledge and skills required to successfully fill positions that perform maintenance and alteration tasks. In addition, when determining its training requirements, a repair station should analyze the nature of its business structure and its customers.

b) When identifying overall training needs, the repair station will consider:

- The tasks associated with each position responsible for performing maintenance, preventive maintenance, or alteration;
- The skills, experience, and training of new and current employees;
- How assessments will be made of employees being assigned new tasks;
- The return of an employee to tasks after an extended period;
- The introduction of new regulations, procedures, equipment, or recordkeeping requirements; and
- Change in the nature of basic repair station capability.

c) The needs assessment reviews the repair station's training requirements in the context of its existing staff's capability and tasks associated with specific work assignments. Based on the outcome of its training needs assessment, the repair station can develop and revise its areas of study and/or courses. The training needs assessment should identify the requirements for initial and recurrent training. Based on its needs assessment, the repair station will determine the type and extent of training needs for the company and for individual employees.

2) Employee Needs Assessment.

a) The repair station's procedure should evaluate the current capability of its repair station employees, both technical and nontechnical. Only those performing maintenance or alteration tasks must be trained under 14 CFR Part 145; however, the repair station may wish to include employees that support or manage technical personnel. The training program should differentiate between those employees required to be trained under the program and those that will be trained in accordance with the procedures at the repair station's discretion. Once a technical employee's capabilities have been assessed, employee specific training needs will be identified.

b) When carrying out any assessment of an individual's capabilities, the repair station's process should be as objective as possible and structured to produce consistent results. The repair station should establish the standard skill level and qualifications for assigned tasks under the job function or position, then establish objective methods for comparing an individual's capability to those standards. It may be necessary for the repair station to use more than one method to adequately assess an individual's capability. The repair station should also have procedures to accept prior experience, training, or education to establish an individual's capability. For example, a repair station may accept graduation certificates from a Part 147 school and/or an Airframe & Powerplant (A&P) certification as acceptable evidence of a basic knowledge and skill level in a particular area. A repair station could also have procedures for accepting certificates from previous training by manufacturers, associations, or military records. The repair station should have procedures to ensure the following:

- The assessment is objective based and consistent;
- The assessment is documented in the individual's training records;
- The individual conducting the assessment is qualified to evaluate the results of the assessment; and
- The individual is capable of performing the tasks consistently at an acceptable level and assigning necessary initial, recurrent, or remedial training.

3) Indoctrination. Indoctrination training should consist of the repair station's specific operations and procedures. This is core training for all repair station personnel. The scope and depth of indoctrination training may vary based on the individual's assigned position. However, indoctrination training should be similar for all employees to establish a standard core of knowledge. The repair station should determine the level of indoctrination training required for each job assignment, through its training needs assessment process. The following subjects should be addressed in the training program, regardless of the repair station's size or ratings:

a) Title 14 CFR requirements, particularly those associated with the repair station maintenance functions and authority as reflected on the certificate and operations specifications.

b) Company manuals, policies, procedures, and practices, including quality control processes, particularly those associated with ensuring compliance with maintenance (including inspection), preventive maintenance, and alteration procedures established to show compliance with 14 CFR Part 145.

c) Department of Transportation hazardous material (hazmat) requirements, general Occupational Safety and Health Administration (OSHA) and Environmental Protection Agency (EPA), and other local, state, and federal laws requiring training for different categories of employees.

NOTE: The repair station must not confuse employee hazmat familiarization and training with the regulatory requirement of DOT Title 49 of the Code of Federal Regulations (49 CFR) § 171.8 “hazmat employee/hazmat employer” training standards, which require mandatory hazmat training for those personnel engaged in the shipping of hazmats.

d) Maintenance human factors.

NOTE: Training in maintenance human factors is an essential Part of an FAA-approved training program. The repair station’s submitted training program and any revision thereto must include human factors elements. The FAA will not prescribe what human factors elements to include, but those elements should focus on aviation maintenance, and safety related issues. If human factors were not included, their exclusion would hinder the training program approval. (See AC 145-10, Repair Station Training Program, for additional information.)

e) Computer systems and software, as applicable to the repair station’s maintenance (including inspection), preventive maintenance, and alteration systems and procedures.

f) Facility security.

g) It should be noted that some of the subjects listed above do not fall under the direct purview of the FAA or Flight Standards Service.

NOTE: Regardless of the experience level of incoming personnel, indoctrination on procedures unique to the repair station should ensure a smooth transition into the work environment. The repair station should schedule this phase of training within a reasonable time after hire to ensure the employee understands the repair station’s operations.

4) Initial Training. This training should consist of all the technical subject areas and be consistent with the specific employee’s position and assigned job activities.

a) The repair station’s technical training areas of study may be separate and distinct from indoctrination training and may apply to different categories of employees within a given job position. Technical training requirements should focus on providing employees with the appropriate skill or task training required to properly perform job position assignments.

b) The repair station should have procedures to determine the applicable scope and depth of initial and/or recurrent training based on each job assignment and each employee’s

experience and capability established by the needs assessment. The needs assessment is the basis for determining an individual's initial and recurrent training requirements.

c) When developing the initial or recurrent training courses, the repair station may want to take into account that individuals will not have the same training, experience, and skill level. For example, when developing its initial course of study for technicians, a repair station may want to have separate programs for:

- Individuals that hold an A&P certificate;
- Individuals with experience performing similar tasks at another repair station;
- Individuals with applicable military aviation maintenance experience; and
- Individuals with no skills, experience, or knowledge.

d) A repair station may have more than one training course for its employees. For example, initial training for new repair station technicians with limited repair station experience may include the following in-depth courses:

- Maintenance human factors

NOTE: Training in Maintenance Human Factors is an essential Part of an FAA-approved Training Program. The repair station's submitted training program and any revision thereto must include human factors elements. The FAA will not prescribe what human factors elements to include, but those elements should focus on aviation maintenance, and safety related issues. If human factors were not included, their exclusion would hinder the training program approval. (See AC 145-10 for additional information.)

- Tools
- Test equipment, including ground support equipment
- Materials and parts
- Records and recordkeeping
- Specific Hazardous Material, OSHA and EPA requirements
- Shop safety
- Specific job or task training

e) In contrast, initial training for new technicians with prior repair station experience may include a general review of the same subjects as necessary and detailed technical training only for specific job or task assignments. In all events, an individual's specific training requirements should be established based on a needs assessment. Additionally, whenever new information is introduced on the topics, the initial training requirements for new employees should be updated and existing employees should be provided abbreviated initial training on the new information. Alternatively, the additional information may be imparted to existing employees through the recurrent training requirements.



f) The time devoted to initial or recurrent training can vary depending on the level of experience of the individual and skills and knowledge associated with the assigned job or tasks. However, the repair station should establish a basic minimum standard for all employees in a specific job position, whether through training given by the repair station or knowledge acquired through other sources. For example, the repair station could establish minimum time requirements for training or alternatively could assess the need for training based upon skills and knowledge testing. In either event, the repair station training program must ensure that the employee is capable of properly performing assigned tasks.

g) Some of the subjects listed above do not fall under the direct purview of the FAA or Flight Standards Service.

5) Recurrent Training. This training program element should provide procedures for recurrent training of subject areas relevant to a repair station employee's job function in order for them to remain current within their assigned job activities.

a) Recurrent maintenance training commonly includes training known as refresher training, to ensure that a repair station employee remains capable of properly performing the assigned job. The repair station's program should define the terms "initial" and "recurrent" and identify the areas of study and/or courses/lessons that will be provided under the two definitions. The definitions should be associated with either the person receiving the training or the training course or information being offered. The repair station should have procedures to determine the recurrent training requirements for each job assignment or employee. Not all job assignments will have the same recurrent training requirements. The repair station may also wish to provide a procedure for determining when training is not required to ensure an employee is capable of performing assigned tasks.

b) The repair station should have procedures to determine the type and frequency of recurrent training for each of its employees through the needs assessment. The repair station may also need procedures to develop one-time recurrent training courses when there are changes to the subjects of initial training. Alternatively, or in addition, the repair station may define standard recurrent training that will be provided on a regular basis to address any subject provided in initial training. If the repair station provides new information on initial training requirements to existing employees under the recurrent training system, its program procedures should set forth two different types of recurrent training:

- That which updates the initial training requirements on a one-time basis, and
- That conducted on a regular basis (refresher training).

NOTE: Each repair station's recurrent training program should differ as it should be based on the repair station's needs assessment, which will take into account its size, employees, customers, and complexity of ratings and operations.

6) Specialized Training. The repair station should have procedures to identify job assignments that will require special skills or have complexity that would require the development of specialized training to ensure capabilities. Some areas that may require

specialized training include flame and/or plasma spray operations, special inspection or test techniques, special machining operations, complex welding operations, aircraft inspection techniques, or complex assembly operations. Individuals who attend specialized training and develop competency in a particular job assignment or task should be able to convey the information to other employees. The repair station's training program should address the initial and recurrent training requirements for any task or assignment that it determines requires specialized training.

7) Remedial Training.

a) A repair station should have procedures to determine an individual's training requirements, including when an employee will be provided remedial training. The repair station should use remedial training procedures to rectify an employee's demonstrated lack of knowledge or skill by providing information as soon as possible. In some instances, remedial training may consist of an appropriately knowledgeable person reviewing procedures with an employee through on-the-job training (OJT). Remedial training should be designed to fix an immediate knowledge or skill deficiency and may focus on one individual.

b) Successful remedial training should show an individual what happened, why it happened, and how to prevent it from happening again in a positive manner. Remedial training may be included in the repair station's definitions of initial or recurrent training requirements.

8) Training Documenting. Training program documentation should be tailored to the repair station's size and job assignments, complexity of capabilities and maintenance functions.

a) The repair station must document, in a format acceptable to the FAA, the individual employee training records set forth in the manual approved by the FAA under Part 145, § 145.163(a). The capability of each employee depends on training, knowledge, and experience. Consequently, the determination by the repair station that an employee is able to perform the maintenance, preventive maintenance, or alteration assignment requires an analysis of the factors that contribute to the employee's capability. The data to accomplish this analysis should be found in the employee's training records if the principles of this chapter are followed when the training program is developed.

b) The repair station may retain its training records electronically or in hard copy. In either case, the repair station should standardize the format and content for the training records based on individual job assignments. However, each employee's records should contain at least:

1. The employee's name and job position;
2. Training requirements as determined by the needs assessment, including requirements for indoctrination, initial, and other training required by areas and course titles;
3. FAA certificates applicable to the qualifications. For example, supervisors, RII personnel and persons approving articles for return to service must be

certificated under 14 CFR Part 65, excluding those repair station personnel located outside the United States and its territories (see paragraph 3-4467 of this section);

4. Other certifications, diplomas, and degrees;
5. Authorizations and qualifications (if not covered by 14 CFR Part 65 certificates);
6. Proof of training course completion, if determined applicable to capabilities; and
7. List of accomplished training, to include enough information to determine whether it is applicable to the employee's capability to perform assigned tasks:
  - Course title or description,
  - Course objective,
  - Date completed,
  - Test results,
  - Total hours of training,
  - Location of training,
  - Name of instructor and/or instructor qualifications, and
  - Signature of employee.
8. Other documentation relevant to determining capability to perform tasks associated with assigned duties, such as past employment, knowledge, oral, and practical tests results, etc.

c) All records that are required by the training program to determine whether an employee is capable of performing assigned tasks as well as those that document training conducted by the repair station should be considered those required by Part 145, § 145.163(a). Therefore, these records should be detailed in the training program and retained for a minimum of 2 years. The repair station is encouraged to have procedures to regularly review all training records to ensure they comply with the requirements set forth in the training program manual.

**D. Measurement of Capability.** The training program should have methods to identify current levels of capability and methods for monitoring and managing capability. Section 145.163 requires that "the training program must ensure each employee assigned to perform maintenance, preventive maintenance or alterations, and inspection functions is capable of performing the assigned task." Organizations should have a mechanism for determining capability of employees for all areas (both technical and non-technical) in which an employee is required to be competent. Assessing capability in the practical application of tasks and maintenance functions is difficult; therefore, it may be appropriate for the repair station to apply a selection of the mechanisms listed below.

1) Examination. A good mechanism for assessing knowledge, but not necessarily capability of applying knowledge in a work context.

2) Interview.

3) Qualifications. A good source of evidence, if the training course or other method used to gain the qualification are directly relevant and practical for application in the workplace.

4) Completion of Training Courses. A good way of providing information, but not sufficient to prove individual capability in applying the knowledge gained from the course.

5) On-the-Job Assessment. A good way of determining capability, however its effectiveness relies heavily on the competence of the supervisor or manager conducting the assessment as it relies on their subjective judgment.

6) Human Factors Assessments. Employees are asked what they would take into account when doing particular tasks. As an example, a planner explains knowledge of maintenance human factors: he would consider the effect fatigue might have and schedule critical tasks to be completed during the day shift or at the start of the night shift rather than in the early hours of the morning. This explanation shows the planner understands how some maintenance human factors issues are applicable to his job. The pervading culture within an organization may be contrary to good assessment principles (e.g., the culture might be that errors are not tolerated, and are regarded as signs of incompetence). If this is the case, it is likely that judgments of capability will be biased towards that company culture. It is important, therefore, that employees are trained in how to assess capability, and that independent checks are carried out of the capability assessment process. Documentation of the assessment process should include:

a) Establish objective levels of capability (apprentice, journeymen, inspector, RII inspector, instructor, supervisor, etc.). Source background for identifying these levels can be based on the concepts described in AC 65-2 and 14 CFR Part 147, appendix A. Other sources of concepts may be required to determine instructor, manager, and other employee levels.

b) Establish levels of capability based on the specific job function of the employee and identify the task level to which that employee is able to perform.

c) Monitor and manage capability through documentation of the performance level of the employee:

- Method of ensuring that the employee understands the application of maintenance, preventive maintenance, or alterations and the repair station's performance issues appropriate to that person's function in the organization
- Recording of the capability of the employee to consistently repeat the performance of a task at an acceptable level
- Audit of tasks performed
- Method for identifying and correcting deficiencies

NOTE: Foreign repair stations regulated by EASA use the word "competency" in their EASA Part 145 regulations. The FAA uses the word "capability" in 14 CFR

§ 145.163(b). When an FAA-certificated domestic or foreign repair station uses one of these words in their training program, they are to be considered synonymous in their meaning and application.

**3-4467 ISSUES AFFECTING PROGRAM REQUIREMENTS.** The following issues vary by repair station and may affect the construction of its training content.

**A. Added Requirements.** Maintenance performed for parts 121, 125, 135, and for foreign air carriers or foreign persons operating a United States-registered aircraft in common carriage under 14 CFR Part 129 adds requirements to the repair station training program, which must be documented. Repair station procedures should describe a plan for ensuring that training is conducted on the air carrier's program for the maintenance functions to be contracted prior to the facility performing maintenance, preventive maintenance, or alterations for the specific air carrier or commercial operator. Documentation and recording of the specific training is the responsibility of both the air carrier and the repair station. Documented training should show specifically that the repair station was trained in accordance with the air carrier's or commercial operator's program and applicable section of its maintenance manual.

**B. Foreign Repair Stations.** The significant difference between domestic and foreign repair station personnel is that foreign repair station personnel are not issued a certificate under Part 65. Equivalent personnel positions must have the same level of training as specified for their domestic counterparts. This training would include those subject areas as discussed in this chapter.

**C. EASA-Accepted Facilities.**

1) Repair stations that hold approval under EASA may already have a training program that complies with Part 145 requirements. PIs should perform a careful review of this program to ensure that the applicable regulatory requirements of 14 CFR or EASA § 145.163 are met. Upon review by the PI to ensure that the training program contains all the required elements, the PI may then approve the program. The training program now becomes the repair station's FAA-approved training program. For a certificated repair station that operates within the guidelines defined in an "International Agreement," that repair station's training program is approved in accordance with the procedures of that agreement.

2) A difference between FAA and EASA requirements is that knowledge of human performance and limitations (HPL) has been International Civil Aviation Organization (ICAO) Standards and Recommended Practices for many years. EASA Part 145 expanded its training requirement to extend HPL to all staff as well as certifying staff, and to include initial as well as recurrent training.

**3-4468 TRAINING METHODS AND SOURCES.**

**A. Methods.** There are many methods available to formulate a good training programs as well as actually delivering training. Certain training methods are more appropriate than others are for teaching specific types of skill and knowledge. Training methods can be classified into one of the following categories:

1) Classroom Training. A training course is normally defined as one that is usually taught by a manufacturer or other aviation agency/operator, or the repair station if instructor-training personnel are trained and subject matter experienced. A valuable asset of this type of training is the interaction between course instructors and attendees, where views and experiences are compared. The importance of a skilled and knowledgeable trainer cannot be overestimated. Much of the emphasis of training should be upon reinforcing or changing attitudes and imparting knowledge; and a good trainer/facilitator is the key. This is normally considered in classroom/formal training where the quality of the training relies heavily on the instructor's ability and the adequacy of the classroom environment.

2) On-the-Job Training (OJT). OJT encompasses the basic principle of learning while accomplishing a task or work. Normally this consists of demonstrations and supervised practice with equipment and procedures in the actual work environment. It can be an effective method of imparting skills to employees, and may be most effective when:

- Employees already have prerequisite knowledge and skills and do not need long explanation and discussions;
- The target skills can only be taught, or are best learned, in an actual work environment;
- The work environment cannot be reasonably simulated or replicated in the classroom or with computer-based training (CBT);
- The training task closely matches tasks found in the repair station, such as accomplishing steps in a procedure;
- Training program documents appropriate curriculum and syllabuses; and
- Training program documents a method to ensure that OJT instruction personnel are qualified and experienced in giving training.

3) Computer-Based Training. CBT, or Internet-based training, is a generic term that refers to any electronically-based technology that is used to create and deliver training. Most products include built-in testing, participant management, administration, and recordkeeping functions. There are wide varieties of hardware and software applications that can be used or tailored to a particular repair station's needs.

a) The primary advantages are an interactive method of training, intelligent tutoring systems, and the capacity of material to be adapted to individual employee needs with testing that conforms to a level of knowledge, skill, and pace. It permits the material presentation and testing to be standardized. It is also good for enhancing skills that require practice, such as troubleshooting and computational skills, or memorization of facts such as specifications. Use of CBT prior to attending a course/class can help ensure that an employee masters the basic prerequisite knowledge needed for the class.

b) Repair stations should assess whether or not the particular category of a training program can be completed by use of CBT alone or by adding practical skill level training and testing to ensure the appropriate capability level of the employee.

4) Distance Learning. This refers to any training in which the instructor and the employees are not in the same geographical location. There are many different forms such as:

- Mail-based correspondence courses using written, videotaped, or even CBT materials;
- Satellite and video conferencing or “virtual” classroom;
- CBT one-way video or one-way video with two-way teleconferencing; and
- Internet/Intranet can provide both live instruction and interactive courseware similar in manner to CBT.

a) Normally the employee watches a video, completes the corresponding work assignment, and the materials are mailed back to the granting institution.

b) The advantage to this type of training is that material, employee testing, and assessment are more likely to be standardized and can be tailored to a repair station’s needs and provide information for required records.

5) Just-in-Time/Embedded Training.

a) This permits users to learn specific job tasks just before they need to accomplish it, or during the accomplishment of the task itself. This method of training is also called “embedded” training because it can be incorporated into the equipment or software that is used to perform the job in question. This type of training may encompass interactive instruction or application and require observation by an instructor or supervisor.

b) Embedded training can also appear in software applications and operating systems as sophisticated contextual “help” programs or tutorials. The application itself becomes the instructor. In this case, there is not usually a method to ensure that the employee can perform the specified task to an appropriate level. This means that the training program must contain a method to ensure the designated knowledge and skill level is obtained by the employee. Embedded training is most appropriate under the following conditions:

- Employees cannot be novices, and must have some knowledge of the topic or task;
- The task to be learned is clearly identified in scope and conceptually simple;
- The media and method in which training is embedded are Part of the task or equipment to be learned; and
- A clear record of the employee testing and assessment must be contained in the repair station’s program.

**B. Sources.** A repair station may adopt several training sources in the development of its training program. A combination of sources, methods, and the training needs assessment may be used by the repair station. Each source also has advantages and disadvantages depending on the repair station’s training needs and size. Training sources can be classified into one of the following categories:

1) Original Equipment Manufacturer (OEM). An OEM usually provides both formal and informal types of courses depending on complexity of subject matter. However, there are usually prerequisites that the employee must meet prior to attending OEM courses, such as previous mechanical/electronic background and experience. OEMs that have training departments normally also have the records showing the qualifications of their instructors. Instructor qualifications must be made available to the repair station prior to using the OEM services for training.

- Most OEM training is either a specific system, or article or product of a system, and may not cover the interactivity of system or article to a product.

2) Aviation Maintenance Technician Schools (AMTS). AMTS approved under Part 147 can be a great source of training for repair stations. They have certified and qualified instructors, approved curriculum, syllabus, and course material, and necessary equipment to provide hands-on skills training. While this is an excellent source of training, repair stations may need to supplement this training with their own indoctrination, initial, and recurrent training along with article and/or product training to a specific level. The repair station's training program should describe the use of this type of source and have a method (assessment) to determine what is most suitable for it and its personnel, when it plans to use an AMTS.

NOTE: In some cases, repair stations may choose to use AMTSs, other repair stations, air carriers, or other entities to provide all or some of their training under contract. If this is the case, the repair station is still responsible for the administrative requirements, such as administration and currency of the training program, qualifications of instructors, ensuring the capability of personnel, maintaining training records, and coordinating approval and changes to its program with the CHDO, etc.

3) Other Repair Stations. Large Part 145 repair stations, especially those that are EASA-accepted or who perform work for an air carrier or operator, may be an excellent source to provide training to smaller repair stations. Smaller repair stations may contract with these facilities for technical training as it pertains to its ratings and operations specifications or maintenance human factors training. The utilization of this type of training may provide a cost savings to a smaller entity.

4) Federal or State Agencies. In many cases, Federal or State agencies provide training courses on aviation industry and related industry requirements: regulations, Occupational Safety and Health Administration (OSHA)/Environmental Protection Agency (EPA), shop safety, maintenance human factors, etc. When repair stations make this type of training a Part of their program, they should ensure that the training meets the needs and requirements of the repair station's capabilities.

5) Trade Associations. Many trade associations provide a variety of training sources including seminars, product demonstrations, videos, computer-based instructions, and equipment manufacturers, etc.



6) Other Sources. There are a variety of other training sources, which include, but are not limited to, independent seminars, product demonstrations, computer-based instructions, videos, and equipment manufacturers. All sources of information should be viewed as potential training sources. The repair station's training program should have a method of incorporating training opportunities to ensure each employee is capable of performing assigned tasks.

7) A combination or all of these methods and sources may be appropriate to any given repair station.

**C. Coordination Requirements.** These tasks require coordination among the ASIs (Maintenance and Avionics). Regional coordination may be required.

### **3-4469 REFERENCES, FORMS, AND JOB AIDS.**

#### **A. References.**

- Title 14 CFR parts 39, 43, 45, 65, 91, 121, 125, 135, and Part 145, §§ 145.163 and 145.209(e),
- AC 145-10, Repair Station Training Program, and
- AC 145-9, Guide for Developing and Evaluating Repair Station and Quality Control Manuals.

#### **B. Forms.**

- FAA Form 8060-4, Temporary Airman Certificate, and
- FAA Form 8610-2, Airman Certificate and/or Rating Application, (if applicable).

#### **C. Job Aids.** JTAs: (TBD)

### **3-4470 ELECTRONIC MEDIA.**

**A.** Air agencies that elect to use electronic media (CD-ROM, Local Area Network (LAN)-based, or Internet-based systems) must be allowed to use those systems without interference or extra procedures. It is incumbent upon the air agency to ensure its CHDO is equipped for the media it selects to ensure delays or other hindrances do not occur. To ensure a consistent approach to document and manual submissions and revisions, the requirement for signing the title page or revision page will be replaced by transmittal documents.

**B.** Use of electronic transmissions, e.g., e-mail or fax responses, are an acceptable alternative to the cover letter if the repair station is equipped to transmit and receive any necessary attachments. This may include the use of electronic signatures. This method should be addressed in the repair station's procedures and be found acceptable to the FAA.

### **3-4471 EVALUATION AND APPROVAL OF A TRAINING PROGRAM AND REVISIONS.**

NOTE: AC 145-10 developed for industry provides information on the development of a repair station employee training program mandated under § 145.163. The AC provides an acceptable means, but not the only means, of showing compliance with § 145.163. Sample training programs described in appendices 1 and 2 of the AC represent structures that may be used by a repair station to develop its training program. Each person subject to Part 145 should develop his/her own program tailored to individual operations. Because the AC contains only guidance on developing a training program, the word “should” used within the AC applies only to an entity that chooses to follow a particular suggestion without deviation.

NOTE: AC 145-10 contains additional governmental, mandatory, and non-mandatory subjects not specifically required by § 145.163. The FAA is aware that the additional training outlined in the AC exceeds that required by § 145.163, but we feel it necessary to provide these subject samples as a guide for a complete and comprehensive safety directed program. If the repair station chooses to develop a training program with the additional non-regulatory subjects, only those required by regulation would be subject to FAA approval. One means of developing this type of program by a repair station could include a separation of the regulatory and non-regulatory training subjects within their training manual.

NOTE: Training in maintenance human factors is an essential Part of an FAA-approved training program. The repair station’s submitted training program and any revision thereto must include human factors elements. The FAA will not prescribe what human factors elements to include, but those elements should focus on aviation maintenance, and safety related issues. If human factors were not included, their exclusion would hinder the training program approval. (See AC 145-10 for additional information.)

**A. Overview of the Process.** Training program approval is predicated upon the repair station’s ability to conform to the requirements of 14 CFR Part 145, which is based on a repair station’s specific capabilities. Depending on the complexity of the repair station’s request and the availability of FAA resources, the approval process may be accomplished in only a few days, or the process may last a few months. Once the FAA approves the repair station training program the repair station will begin to follow their approved procedure. The approval process applies to each repair station requesting approval of a new program or a revision to a currently approved program. Training programs submitted to the FAA for approval and found to be in conflict with regulatory requirements or inadequate, must be appropriately modified by the repair station in accordance with established procedures of the repair station manual. When appropriate, job aids have been developed to assist inspectors in the approval process. These job aids are discussed in paragraph 3-4475 of this chapter.

## **B. Procedures for Obtaining Training Program Approval.**

1) The procedures for obtaining the training program approval normally begin with a meeting between the responsible training personnel of the repair station and the PI to discuss the scope of the training, the timing of the program document submittal, and other plans. This meeting will be an opportunity for the repair station to ask questions about the FAA process. Although this meeting is not required, it will provide an opportunity for both sides to understand the expectations of the other on a subject that is new to both. For a new repair station, this initial meeting is also an opportunity for the FAA to verify the intent of a new repair station with respect to:

- Ratings and other authorizations that will be sought;
- Maintenance function that will be contracted;
- Customers that include Part 121, 125, and 135 and/or certain Part 129 operators;
- Personnel current and required capabilities;
- Tools, equipment, and facilities;
- Overview of procedures and paperwork; and
- Proposed training and training sources.

2) The formal submittal of the training program should be made on or before the dates as defined in 14 CFR Part 145.

3) The repair station may submit its program document as electronic media; however, it is the repair station's responsibility to ensure the CHDO is equipped to review and store the submitted material in the media the repair station selects. Material submitted electronically must be accompanied by a transmittal document. The FAA approval will be similarly indicated by a transmittal document. These transmittal documents may be in the form of an e-mail, fax, or letter and may include the use of electronic signatures. As required by § 145.209(e), the repair station's manual must contain a description of the procedure it will use to submit changes to the training program. Similar procedures should be used to submit the program for initial approval. The repair station's accountable manager or someone acting on his or her behalf must sign the submittal.

4) The content of the initial training program submittal may be reviewed using the criteria and standards described in AC 145-10.

5) The FAA will review the proposed training program or revision and either approve it or prepare an explanation of why the program or revision cannot be approved as submitted. A letter or electronic transmittal of the FAA approval or rejection will be sent to the individual who has signed the submittal for the repair station.

6) If the FAA is not able to approve a submittal, the repair station should propose revisions that address FAA's concerns. When the repair station has adequately addressed all the concerns expressed in the FAA rejection, the program will be approved.

7) A change to the approved training program can be initiated by the repair station or by input from the PI. Any revision to the program document should be provided to the inspector for approval. The training program will be changing constantly, as it should, to accommodate changes to the repair station's work and/or customers, and in response to the ongoing assessment processes of the repair station and of the FAA. Correction of typographical errors and changes to phone numbers, would be examples of changes not needing FAA approval. However, the repair station should send a corrected copy to the FAA.

8) The FAA does not determine instructor qualifications. However, if the FAA—through its surveillance process—finds that the qualifications or skills of an instructor are deficient, the repair station must correct any deficiency associated with that instructor and with its instructor selection and quality monitoring process.

9) The training program must have a process measurement element that verifies the effectiveness of the training. This provides a continuous improvement characteristic to the training program. Therefore, one of the key areas the FAA will monitor is the feedback process that takes evaluation results and adjusts training needs. The FAA might also independently assess training to evaluate the effectiveness, particularly where safety risk is relatively high.

10) Training standards are not set by the FAA but the PI should verify that the repair station has an adequate training program to meet regulatory requirements. If, in the course of normal surveillance or in the investigation of an unplanned and undesirable event, an FAA inspector discovers inadequate training, he or she will notify the repair station that a training deficiency has been identified and that a change must be made. The FAA will give the repair station a reasonable time to make the change as long as steps are taken by the repair station to ensure no unairworthy product results from the training deficiency. When the repair station develops a modification to the training program to correct the deficiency, the FAA will review it and either approve the revised program or indicate that additional changes are still required.

11) If the program or program revision is submitted in an electronic format, the FAA inspector will indicate approval or denial with an e-mail message or letter. If approval of the submittal is denied, the FAA e-mail message or letter will include an explanation of the denial.

12) The training program revision process may be initiated by either the repair station or the FAA as follows:

a) Repair Station Initiated. The operator informs the FAA that it is planning to establish a new training program element/component or to change an existing program.

b) FAA Initiated. The FAA informs an operator that revisions to its training program are required based on recently acquired information relative to training techniques, aviation technology, aircraft maintenance history, or regulatory changes.

13) The training program approval/rejection process may be initiated by the FAA. as follows:

a) When review of the training program or revision has shown compliance with the regulation and the form and manner prescribed in this chapter, issue a Letter of Approval. (See figure 3-155.)

**Figure 3-155, Example Letter of Approval**

ABC Repair Station  
Accountable Manager  
417 Oakton Boulevard  
Enid, OK 78154

Dear Mr. Townsend:

Training program/revision approval is granted to ABC Repair Station's training program, dated May 21, 2006. The effective date of approval is May 21, 2006. ABC Repair Station may continue to train in accordance with this program until a revision is required by the FAA under § 145.163(d), or until ABC Repair Station revises its program.

b) When review for approval of the training program or revision is rejected, issue a letter of rejection, with an explanation of discrepancies; the above letter of approval format may be used. (See figure 3-156.)

**Figure 3-156, Example Rejection Explanation Statement**

This letter is in response to your request for approval of Revision 2 to ABC Repair Station's training program/revision, dated March 2, 2006. Your request for approval of revision 2 is rejected for the following reason. Revision 2 deletes training previously given on Cessna 182 aircraft and does not provide any identifiable instruction to your mechanics, repairmen, or technicians. Presently there is not another course of training for ABC Repair Station containing adequate information on Cessna 182 aircraft maintenance.

NOTE: A repair station training program must meet the requirements of § 145.163. A repair station's training sources, training methods, curriculum, training courses, etc. are not subject to FAA approval. The PI only determines that the elements of a repair station training program are met, which ensure the repair station trains to meet its capabilities and customer specific requirements. The training program content will be evaluated for compliance of the rule. The repair station shoulders the responsibility that its training program sources, methods, curriculum, and courses meet the requirements of the rule and its customers.

**C. Evaluating Training Program.** The Training Program Evaluation Elements listed in table 3-123 may also be used as an inspector tool in determining that a repair station's training program contains the elements necessary to sustain the repair station capabilities.

1) At a repair station to which more than one discipline of inspector is assigned, inspectors should work together during the review and approval of the training program. Even a repair station assigned only one PI may benefit from a peer review using their expertise to ensure that programs are in accordance with the regulations.

2) The evaluation begins when the repair station starts training under the approved training program. The PI should monitor training conducted under program approval. Whenever possible, the first session of training conducted should be monitored by the PI or a qualified inspector. An FAA inspector does not need to observe every training session. A sufficient sampling of the training sessions, however, should be observed as a basis for a realistic evaluation.

3) During the evaluation, the repair station must demonstrate the ability to effectively train their personnel. Any deficiency identified during the evaluation of the training program must be discussed with the repair station. The repair station will make the necessary changes to correct the deficiency to its training program.

**D. Elements Available for Evaluating Training.** The PI must develop a plan for systematically evaluating training given under the approved training program. There are five elements, which can be evaluated when assessing the overall effectiveness of training programs. These five elements are: course outlines, courseware, training methods and training environment, testing and checking, and surveillance and investigation of repair station activities. These elements are interrelated; however, each can be separately evaluated. (See Table 3-124 for a summary of the five elements.)

1) Before evaluating a training program, an inspector must become familiar with the contents of the training courses to be evaluated. This preparation is essential if an inspector is to determine if a repair station has developed an effective course of instruction.

2) Direct examination of courseware includes reviewing materials such as lesson plans, workbooks, etc. Courseware is usually the training program element which is most adaptable to revision or refinement. Inspectors must review at least a sampling of the courseware.

3) Direct observation of instructional delivery includes surveillance of training methods, such as instructor lectures, CBT presentations, and OJT instruction. Effective learning can only occur when an instructor is organized, prepared, and properly uses the courseware and various training aids. The inspector must determine if the instructional delivery is consistent with the courseware. For example, the inspector should note if the instructor teaches the topics specified in the lesson plan. Training aids and devices should function as intended during the instructional delivery. In addition, during training, the inspector should be sensitive to the type of questions being asked by employees and should identify the reasons for any excessive repetition. These conditions may indicate ineffective training method or courseware. The inspector must also determine if the instructional environment is conducive to learning. Distractions which adversely affect delivery, such as excessive temperatures, extraneous noises, poor lighting, and cramped classrooms or workspaces, are deficiencies because they interfere with learning.

4) Direct observation of testing and checking is an effective method for determining whether learning has occurred. Examining the results of tests, such as oral or written tests, or OJT, provides a quantifiable method for measuring training effectiveness. The PI must examine and determine the causal factors of significant failure trends.

5) Direct observation of training and checking in progress is an effective method of evaluating training. Sometimes the opportunity for direct observation, however, will be limited. In such cases, the PI will have to rely more on his evaluation of other sources of information such as reports of surveillance and investigations. Results of inspection reports, incident or accident reports, enforcement actions, and other relevant information about the repair stations should be evaluated by the PI for training effectiveness. For example, repeated reports of deficiencies, such as inability to grasp troubleshooting techniques or incorrect use of technical data or RSM procedures, may be traceable to a lack of specific training or ineffective training. Such information may provide indications that revisions or refinements are needed for a training course and/or training course modules.

**Table 3-123, Elements for Training Evaluation**

Course Outlines	Course outlines contain the specific training course modules and the amount of time allocated for the course. The course modules must be consistent with the regulatory requirements and safe maintenance practices. This element requires direct examination.
Courseware	Courseware converts syllabus outline information into usable instructional material. Courseware must be consistent with the syllabus outline and be organized to permit an effective training method. It is readily adaptable to adjustments and refinement by the repair station. This element usually requires direct examination.
Training Methods and Training Environment	Training methods are used to convey information to the employee. Effective learning is maximized if the training method adheres to and properly uses the courseware. The training environment should be conducive to effective learning. This element requires direct observation.
Testing and Checking	Testing and checking is a method for determining whether learning has occurred. Testing and checking standards are used to determine that a desired level of knowledge and skill has been acquired. Testing and checking also measures the effectiveness of courseware and training method. This element requires direct observation. It can be supplemented by examining repair station's records of test and checks.
Surveillance and Investigation of Repair Station Activities	Surveillance and investigations produce information about a repair station's overall performance. A high rate of satisfactory performance usually indicates a strong, effective training program. Repeated unsatisfactory performances can often be traced to deficiencies in a training program. This element requires the examination and analysis of surveillance and investigative reports.

**3-4472 TASK OUTCOMES.**

**A.** Complete PTRS.

**B.** Complete the Task. Completion of this task will result in one of the following actions:

1) Approval/denial of the training program/revision by doing the following:

a) Place “Approved,” with date, office identification, and signature of inspector on the list of effective pages;

b) File office copy of training program/revision as follows:

- If an original training program, file a copy of the entire training program in the certificate holder/applicant’s office file; and
- If a revision, remove affected pages, insert revised pages in current training program, and update the manual control system.

c) Return the training program/revision to the applicant with a letter.

2) Reject the training program/revision by doing the following:

- Return all copies to the applicant with letter explaining discrepancies; and
- Explain to the applicant that the manual must be corrected and resubmitted in order to proceed with the certification or revision process, and file all supporting paperwork in the certificate holder/applicant’s office file and update the Vital Information Subsystem (VIS).

**3-4473 FUTURE ACTIVITIES.** Perform followup and surveillance inspections as required. This section is not all inclusive; repair station size and capabilities may determine which elements are applicable.

**3-4474 INSPECTOR EVALUATION GUIDE FOR THE DEVELOPMENT AND IMPLEMENTATION OF A PART 145 REPAIR STATION’S TRAINING PROGRAM.**

The training program development process includes:

**A. Needs Assessment/Analysis.** The purpose of this phase is to determine the goals and objectives of the training.

**B. Design Phase.** This phase serves to refine training goals and objectives and instructional and evaluation strategies.

**C. Course of Study.** The course categories can be organized into a course outline, specific course, or course modules.

**D. Prototype.** This phase includes the delivery of training materials, the training of instructors, and a dry run of the sections in the program to verify proper flow of the material.



**E. Validation.** At this stage the training can be delivered in a typical training environment. Meetings should be held to discuss and evaluate the prototype to fine-tune the program.

**F. Adoption.** The training program is scheduled and formally announced.

**G. Implementation.** The training is provided at this stage.

**H. Employee Evaluation.** It is important to evaluate the employee's comprehension of all course material.

**I. Program Measurement.** Program developers should identify valid and reliable processes to measure training program effectiveness.

**J. Feedback.** This phase allows the product to influence the training program in a constant cycle of evaluation and improvement, such as through class and/or instructor evaluations.

### **3-4475 ADDITIONAL TRAINING PROGRAM STRUCTURE GUIDES.**

**A. Training Course Outline.** The repair station as appropriate can determine its training requirements. Each course/course module should include the following information:

- 1) Course Prerequisites. What employees must have completed before they are eligible for the course.
- 2) Training Subject. What knowledge is to be imparted by the course and the course content.
- 3) Course Duration. May be specified in hours.
- 4) Training Methods. The method for the training course should be specified. There are varieties of methods to choose from based on what is most appropriate for the course in question. They range from OJT to formal classroom courses.
- 5) Completion Standards. There should be a description of what has to be accomplished for the employee to complete the course/syllabus. Examples of this could be a knowledge or practical test with a passing grade, a submitted project or demonstration of skill, or a certificate of completion.

**B. Qualifications and Authorizations.** The repair station should describe the training requirements for various qualification levels of its employees depending on their job function as well as individual authorizations. For example:

- RII (if applicable),
- Inspector levels,
- Technician skill levels, and
- Specialized services.

**C. Instructor Selection.** The repair stations training program should include criteria for instructors and a description of how instructors are selected. In cases where the sources of training are external to the repair station, it may not be possible to select instructors, but the quality of instruction should be monitored to ensure the quality of training employees receive is adequate.

**D. Planning and Scheduling.** Most training should be scheduled in advance to ensure adequate preparation time and to maintain a continuity of training for all employees. Management should plan training based on current requirements, but the plan should be adaptable to changing needs, such as those of a new customer or with the acquisition of new equipment. Occasionally, remedial training will be required for employees stemming from the results of an audit, or unacceptable skill demonstration. This type of training cannot be scheduled in advance and may have to be accomplished relatively quickly. Therefore, the training schedule should be sufficiently flexible to accommodate such circumstances.

**E. Training Records.** The repair station's training program should specify where employee training records are maintained and for how long (at least 2 years). Many repair stations will elect to keep employee training record summaries in a computer system. If records are maintained electronically, the repair station should also maintain a physical file to keep important documents such as FAA certificates, diplomas, and proofs of course completions. The training program should also specify the procedures by which records are maintained as well as what quality control will be conducted over those records. At a minimum the training record should include:

- Employee's name and signature,
- Dates and duration of training,
- Type of training,
- Location of training,
- Name and signature of instructor, and
- Test results (if applicable).

**F. Training Facility.** A description of the repair station training facility/facilities may be included in the repair station's training program. If the facility has a dedicated classroom, it should be adequately lighted, ventilated, and equipped. Alternatively, an off-site facility could be used, or the facility may be the repair station's work area.

**G. Quality Control.**

1) Each repair station should discuss in their training program how they intend to monitor the quality of the training they provide to their employees. There should be a formalized effort to review the effectiveness of the training program, although this may be through an external means (such as an audit accomplished by a department other than training). At the very least, employees should be asked to fill out course evaluation forms. These should be compiled and analyzed to identify either best practices or deficiencies in instructors or training materials.

2) Supervisors may also elect to attend certain classes to enhance the quality control process, although this may not be easy for classes provided by external organizations. Audits of

external training providers may be scheduled as an alternative. If this is not possible or desirable, some interviewing of returning course attendees can be accomplished to obtain more detailed information than would be possible through a written questionnaire.

**H. Definitions and Abbreviations.** The repair station training program should define all terms and acronyms for the sake of clarity and to avoid confusion in cases where acronyms are company specific and may have different meanings among different facilities.

**Figure 3-157, Training Program Content Analysis**

Repair Station Certificate Number:				
Date Completed:				
A.	Evaluate Training Program.	YES	NO	N/A
1.	Has a systematic analysis been completed to identify the tasks performed by the trainee?			
2.	Does the task list appear complete, based on current roles and responsibilities, facility mission, and ongoing activities?			
3.	Have the required knowledge, skills, and abilities to perform the identified tasks been defined?			
4.	Are the task list and required knowledge, skills, and abilities reviewed and updated periodically to reflect changes in procedures, facility systems/equipment, job scope, and advances in technology?			
5.	Have knowledge, skills, and abilities to be enhanced through training been selected?			
6.	Have training settings including classroom, laboratory, or "on-the-job" training been selected appropriately for the selected knowledge, skills, and abilities?			
7.	Has a logical sequence for training that builds upon a growing base of knowledge, skills, and abilities been defined?			
8.	Have entry-level requirements been specified for employees?			
9.	Do entry-level requirements include physical abilities, educational, technical, and experience requirements?			
B.	Interview Employees.			
10.	Does the training program improve the ability of the employee to perform his/her job?			
11.	Are there elements of employee job or specific tasks where they are not trained, but feel that training is needed?			
12.	Are training settings appropriate for the material covered? (Classroom training covers required knowledge, application training addresses skills, and on-the-job training strengthens abilities to perform tasks)			
13.	Has training been sequenced properly?			
C.	Interview Supervisors.			

14.	Are personnel able to perform their jobs more effectively following training?			
15.	Are there essential tasks or elements of employees' jobs that are not addressed in current training?			
16.	Does a mechanism exist to inform the training organization of changes in job responsibilities, in work practices, and in equipment so that job/task analyses are updated?			
COMMENTS:				

**Figure 3-158, ASI Checklist To Facilitate Training Program Approval**

This checklist is to be used as a minimum standard to assist the ASI in establishing a basis for approval of the training program required by 14 CFR Part 145, § 145.163. The elements identified on the checklist are derived from regulatory requirements and accepted industry practices. The checklist may be altered or modified to fit a wide range of applications in order to attain an acceptable comfort level for the approving inspector. It is recommended that this form or a similar form used by the approving official be retained by the CHDO.

	<b>Repair Station Certificate Number:</b>	<b>YES</b>	<b>NO</b>
1.	Is the manual identified with Company name, address, certificate number, and other contact information appropriate to this manual (phone, fax, e-mail, etc.)?		
2.	Does the manual have a control system?		
3.	Does the control system include a distribution list identifying a particular manual to a person or location?		
4.	Does the manual contain an adequate revision system to allow an easy determination of currency and person responsible for inserting the revision?		
5.	Is there a procedure for submitting revisions to the CHDO for approval and retaining records for a 2 year minimum?		
6.	Does the training program have provisions for initial and recurrent training?		
7.	Does the training program adequately identify task functions for the performance of maintenance or inspection functions?		
8.	Does the training program adequately ensure that each employee performing a maintenance or inspection function is capable of performing the assigned task?		
9.	Are individual training requirements identified and documented in an acceptable manner?		
10.	Is there a method of measure or test to ensure the training is effective?		
11.	Has the advisory circular and handbook guidance been reviewed to ensure that issues particular to this training program have been addressed?		
12.	Does the training manual qualify for FAA approval?		

COMMENTS:	
Signature:	Date:

**RESERVED.** Paragraphs 3-4477 through 3-4490.